

Via-In-Pad With Off-Center Geometry and Methods of Manufacture

Abstract of the Disclosure

5 The electrical contacts of an integrated circuit are coupled to printed circuit
board (PCB) bonding pads that include vias. A method for fabricating an electronic
assembly utilizes at least one operation in which a thermally expansive substance,
such as a volatile organic compound (VOC), is applied to the PCB. Some of the
VOC goes into the via channels. The electrical contacts of a surface mount
10 technology component such as a ball grid array (BGA) solder ball component are
affixed to the bonding pads using a reflow soldering technique. According to one
embodiment, the vias are formed off-center, so as to inhibit bridging between
adjacent solder balls during a solder reflow operation by minimizing the effect of
solder ball ballooning resulting from outgassing of the VOC from the via channels.
A substrate and an electronic system are also described.

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